

REMARKS

Reconsideration and allowance of the claims are respectfully requested in view of the following remarks. The Examiner's attention is directed to note that Formal drawings had been filed on January 14, 2002. However, to facilitate prosecution, Applicants have re-filed the formal drawings herewith to address the Examiner's concerns.

Claims 1 – 23, 26, and 27 are pending in the present application. Claim 28 is newly added to further clarify that which Applicants claim as their invention.

In reference to Detailed Action Item 2:

Claims 1, 5 – 8, 13, and 27 stand rejected under 35 U.S.C. 102(b) as being anticipated by Collier-Hallman et al. U.S. Patent 6,122,579, hereinafter denoted Collier-Hallman '579.

Applicants respectfully suggest that the explanation provided in the Office Action mischaracterizes the teaching of Collier-Hallman '579.

In order to anticipate a claim under 35 U.S.C. § 102, a single source must contain all of the elements of the claim. *Lewmar Marine Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1007 (1988). Moreover, the single source must disclose all of the claimed elements "arranged as in the claim." *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Finally, missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

Regarding Claims 1, 5, and 13, Applicants respectfully suggest that the explanation provided in the Office Action mischaracterizes the teaching of Collier-Hallman '579. Specifically, Collier-Hallman '579 does not teach or disclose, a method for controlling a feel back torque of a motor. Collier-Hallman '579 does not disclose or teach, "receiving a signal indicative of a difference between a desired motor position and an actual motor position". To support the rejection, the Examiner relies upon Collier-Hallman '579 at Col. 2, lines 52 – 54. However, at Col. 2, lines 52 – 54 Collier-Hallman '579 includes no disclosure of a signal indicative of a difference between a desired motor **position** and an actual motor **position**. There is only teaching of a rotor position signal for the motor. Therefore, because Collier-Hallman '579 does not disclose or teach an element of the invention it cannot anticipate

Applicants' claims. Thus, Claims 1, 5, and 13 are allowable, the rejection is improper and should be withdrawn.

Futhermore, Collier-Hallman '579 disclose or teach "filtering the received signal into a plurality of frequency bands; and applying a gain to at least one of the filtered frequency bands **in correspondence with at least one of the received signal and a low-pass portion of the received signal to provide a motor command.**" To support the rejection, the Examiner relies upon Collier-Hallman '579 at Col. 5, lines 45 – 57, and Col. 2, lines 45 – 52. However, at Col. 2, lines 45 – 57 Collier-Hallman '579 merely discloses the filtering applied to the torque signal disclosed therein. Once again, Collier-Hallman '579 includes no disclosure with respect to a signal indicative of a difference between a desired motor **position** and an actual motor **position**, filtering of such a signal, nor applying a gain to at least one of the filtered frequency bands **in correspondence with at least one of the received signal and a low-pass portion of the received signal**The Examiner's attention is directed to Figure 7 of Collier-Hallman '579 where gain scheduler 128 is employed following low pass filter 120. However, the signal that low pass filter 120 and scheduler 128 act upon is a torque signal. See Col. 5 lines 45 – 57. Therefore, because Collier-Hallman '579 does not disclose or teach an element of the invention it cannot anticipate Applicants' claims. Thus, Claims 1, 6, and 27 are allowable, the rejection is improper and should be withdrawn.

With regard to Claims 2 – 5, these claims include the abovementioned limitations and based on the arguments above are therefore now allowable. Additionally, Claims 2 – 5 depend from Claim 1, which is now allowable based upon the abovementioned reasoning, and therefore because these claims depend from a claim that is allowable, they too are allowable and the rejections should be withdrawn. MPEP 2143.03.

Regarding Claims 6 and 27, Applicants respectfully suggest that the explanation provided in the Office Action mischaracterizes the teaching of Collier-Hallman '579. Specifically, Collier-Hallman '579 does not teach or disclose an **active steering system**. Collier-Hallman '579 is drawn to electric power steering systems, while the claimed invention is drawn to an active steering system, i.e. where a mechanical driver input and an auxiliary input coupled via a differential. Moreover, Collier-Hallman '579 does not disclose or teach, "a feel control algorithm for controlling a feel back torque to a driver". To support the rejection, the Examiner relies upon Collier-Hallman '579 at Col. 5, lines 33 – 57, and Figure 7. However, at Col. 5, lines 33 – 57, and Fig 7, Collier-Hallman '579 merely discloses the filtering applied to **the torque signal** disclosed therein. Collier-Hallman '579

includes no disclosure of the error signal as claimed. In fact, the Examiner's parenthetical identifies that the signal considered is from torque sensor 28. This is not an error signal, it is a measured parameter of torque. Therefore, because Collier-Hallman '579 does not disclose or teach an element of the invention it cannot anticipate Applicants' claims. Thus, Claims 6 and 27 are allowable, the rejection is improper and should be withdrawn.

With regard to Claims 7 – 11, these claims also include the abovementioned limitations and based on the arguments above are therefore now allowable. Additionally, Claims 7 – 11 depend from Claim 6, which is now allowable based upon the abovementioned reasoning, and therefore because these claims depend from a claim that is allowable, they too are allowable and the rejections should be withdrawn. MPEP 2143.03.

In reference to Detailed Action Item 3:

Claims 16 - 18, stand rejected under 35 U.S.C. §102(e) as being anticipated by Phillips U.S. Patent 6,370,459, herein after Phillips '459.

With regard to Claims 16 - 18, Applicants respectfully suggest that the explanation in the Office Action mischaracterizes the teachings and disclosure of Phillips '459. Applicants respectfully contend that Phillips '459 does not disclose a differential actuator as cited in the Application. With respect to the Examiner's rebuttal to the arguments presented previously, Applicants respectfully suggest that the Examiner is not giving the term "differential actuator" its plain meaning, nor the meaning and definition enumerated in the specification. MPEP 2111.01 specifically requires that the claims are to be interpreted as broadly as their terms allow. This means that the words of the claim must be given their plain meaning ***unless applicant has provided a clear definition in the specification*** (emphasis added). *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d1320,1322 (Fed. Cir. 1987). A differential actuator and its function are clearly defined in paragraph 2. Phillips '459 does not disclose or teach a "differential actuator", nor its equivalent. Thus, Claims 16 – 18 are in a condition for allowance, the rejections are improper, and they should be withdrawn.

To support the rejection the Examiner relies upon the element 712/722. The cited element 712/722 is described as a speed reduction means (712) and gear reduction means (722). This is not the same as the differential actuator as claimed. In fact it does not operate as a differential actuator either, the speed reduction means is a fixed actuator linked to the steering of the wheels, not a differential actuator. In fact, in order to isolate the electric motor

26 from the steering system in the event of a failure Phillips '459 specifically teaches having to disconnect the motor via a clutching mechanism.

"It is highly desirable that, should the powered assist to steering provided by the system 710 be terminated by the electronic control means 32 *a* in this manner, or should the system 710 otherwise fail, the vehicle can still be steered manually. Isolating the gear reduction means 722 and the electric motor 26 from the mechanical path of manual steering, however, substantially improves the ease of such manual steering. Without isolation, the driver would have to apply an additional torque, over and above that required for steering, in order to overcome the hindrance to steering presented by needing to manually drive the gear reduction means 722 and the electric motor 26. Accordingly, as shown in FIGS. 1 and 2, it is preferred that the system 710 further comprise clutch means 724 between the reduction gear means 722 and the supplemental pinion shaft 178. As is standard, the clutch means 724 is electrically activated during normal operation of the system 710, and reverts to its default disengaged condition should the system 710 become inoperative."

With respect to the Examiner's rebuttal to the arguments presented previously

Therefore, because Phillips '459 does not disclose the elements of the invention it cannot anticipate Applicants Claims. Thus, Claims 16 -18 are in a condition for allowance, the rejections are improper, and they should be withdrawn.

In reference to Detailed Action Item 4:

Claims 4 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Collier-Hallman et al. U.S. Patent 6,122,579, hereinafter denoted Collier-Hallman '579.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996). See MPEP 2143

Establishing a prima facie case of obviousness requires that all elements of the invention be disclosed in the prior art. *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970).

Further, even assuming that all elements of an invention are disclosed in the prior art, an Examiner cannot establish obviousness by locating references that describe various

aspects of a patent applicant's invention without also providing evidence of the motivating force which would have impelled one skilled in the art to do what the patent applicant has done. *Ex parte Levengood*, 28 U.S.P.Q. 1300 (Bd. Pat. App. Int. 1993). The references, when viewed by themselves and not in retrospect, must suggest the invention. *In Re Skoll*, 187 U.S.P.Q. 481 (C.C.P.A. 1975).

Considering Claim 4 and 12, Applicants respectfully contend that the explanation provided in the Office Action mischaracterizes the disclosure of Collier-Hallman '579. Specifically, as stated with the arguments presented above for Claims 1 and 6 respectively, Collier-Hallman '579 does not disclose or teach each of the elements of the claimed invention. Therefore, because Collier-Hallman '579 does not disclose or teach each of the elements in the claimed invention, the Examiner has not made a prima facie case for obviousness as to Claims 4 and 12. Thus, Claims 4 and 12 are allowable, the rejections are improper, and they should be withdrawn.

Claims 2, 3, 14, 15 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Collier-Hallman '579 in view of Yamauchi 6,135,233, hereinafter Yamauchi '233.

Considering Claims 2 and 3, Applicants respectfully contend that the explanation provided in the Office Action mischaracterizes the disclosure of Collier-Hallman '579 and/or Yamauchi '233. Specifically, as stated with the arguments for Claim 1 presented above, neither Collier-Hallman '579 nor Yamauchi '233 alone or in combination, disclose or teach each of the elements in the claimed invention.

Therefore, because neither Collier-Hallman '579 nor Yamauchi '233 alone or in combination, disclose or teach each of the elements in the claimed invention, the Examiner has not made a prima facie case for obviousness as to Claims 2 and 3. Thus, Claims 2 and 3 are allowable, the rejections are improper, and they should be withdrawn.

Considering Claims 14 and 26, Applicants respectfully contend that the explanation provided in the Office Action mischaracterizes the disclosure of Collier-Hallman '579 and/or Yamauchi '233. Specifically, as stated with the arguments for Claim 1 presented above, neither Collier-Hallman '579 nor Yamauchi '233 alone or in combination, disclose or teach each of the elements in the claimed invention. Specifically, neither Collier-Hallman '579 nor Yamauchi '233 disclose or teach, "receiving a stability input indicative of a dynamic stability of the motor vehicle". To support the rejection, the Examiner relies upon Collier-Hallman '579 at Col. 2, lines 46 – 77 referring to the velocity and pinion angle. However, at Col. 2,

lines 46 – 47 of Collier-Hallman '579 there is no disclosure of an element indicative of the dynamic stability of the vehicle. Collier-Hallman '579 merely discloses receiving a steering angle and a vehicle velocity. Furthermore, neither Collier-Hallman '579 nor Yamauchi '233 teach or disclose, "calculating a correction signal in accordance with the operator input and the stability input." Similar to the arguments for Claim 1, there is no teaching in the cited references that a correction signal is computed prior to the filtering. Therefore, because neither Collier-Hallman '579 nor Yamauchi '233, whether alone or in combination, disclose or teach each of the elements in the claimed invention, the Examiner has not made a prima facie case for obviousness as to Claims 14 and 26. Thus, Claims 14 and 26 are allowable, the rejections are improper, and they should be withdrawn.

With regard to Claims 15, this claim includes the abovementioned limitations and based on the arguments above are therefore now allowable. Additionally, Claim 15 depends from Claim 14, which is now allowable based upon the abovementioned reasoning, and therefore because this claim depends from a claim that is allowable, it too is allowable and the rejections should be withdrawn. MPEP 2143.03.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips '459 in view of Collier-Hallman '579. Applicants respectfully contend that the explanation provided in the Office Action mischaracterizes the disclosure of Collier-Hallman '579 and/or Phillips '459. Furthermore, for the reasons previously stated, neither Collier-Hallman '579 nor Phillips '459 whether alone or in combination teach or disclose each element of the claimed invention. Therefore, because neither Collier-Hallman '579 nor Phillips '459, whether alone or in combination, disclose or teach each of the elements in the claimed invention, the Examiner has not made a prima facie case for obviousness as to Claims 21 and 22. Thus, Claims 21 and 22 are allowable, the rejections are improper, and they should be withdrawn.

The amendments and arguments here presented are made for the purposes of better defining the invention, rather than to overcome the rejections for patentability. The claims were not amended to overcome the prior art and therefore, no presumption should attach that either the claims have been narrowed over those earlier presented, or that subject matter or equivalents thereof to which the Applicants are entitled has been surrendered. Support for these amendments can be found in the specification and claims as originally filed. No new matter has been introduced by these amendments. Consideration and allowance of the claims

is respectfully requested in view of the amendments and following remarks. Moreover, the amendments as presented do not alter the scope of the claimed invention and therefore cannot necessitate a new grounds rejection.

It is believed that the foregoing remarks are fully responsive to the Office Action and restriction and that the claims herein should be allowable to the Applicants. Accordingly, reconsideration and withdrawal of the rejections are requested.

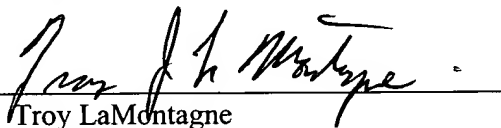
In the event the Examiner has any queries regarding the instantly submitted response, the undersigned respectfully requests the courtesy of a telephone conference to discuss any matters in need of attention.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

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Date: October 07, 2003

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